Corning® SF Medium

Guidelines for Use

CORNING

Introduction

Serum has been extensively used as a supplement to chemically define media for mammalian cell culture due to its beneficial attributes. However there are many negative aspects associated with the use of serum such as time consuming sampling, lot-to-lot variability, presence of adventitious agents, and availability. We have developed Corning SF Medium, a serum-free, low protein (1 mg/mL BSA) medium which meets nearly all cell culturists' needs for the production of recombinant proteins, viral vaccines, monoclonal antibodies, and estrogen-responsive cell systems. Originally formulated to satisfy the needs of RPMI, DMEM, DMEM/F-12, and McCoy's 5A basal media users, it has now been adapted for cell culture protocols using many types of media.

Specifically engineered, the Corning SF Medium formulation is based on a 50/50 mix of DMEM/F-12 and a mixture of selected trace elements and high molecular weight carbohydrates, extra vitamins, a non-animal protein source, and a small amount of high quality BSA (1 mg/mL) to support superior growth and viability over long-term passages in hybridomas, as well as suspension and adherent cell culture. The Corning SF Medium advanced formulation requires minimal adaptation and facilitates adaptation of adherent-dependent cells to high density suspension cultures, thereby saving valuable time.

Corning SF Medium is an enriched serum-free growth medium that does not contain any insulin, transferrin, cholesterol, or growth and attachment factors. Uniquely depleted, the formulation promotes a starting point for customization by the addition of cell-specific growth factors. By reducing the amount of extraneous protein in the formulation, separation/purification and downstream processing of recombinant proteins are simplified and consequently less expensive. In addition, Corning SF Medium is without phenol red to eliminate inherent concerns about the estrogenic effects of phenol red in estrogen-responsive cell systems.

Procedure

Two general guidelines for use have been established for the adaptation of both suspension and adherent cells from serum-containing media into Corning SF Medium.

Method A

Step 1: Seed cells growing in serum-supplemented medium into a 1:1 mixture of the original medium and Corning SF Medium at approximately 3 to 5 x 10^5 cells/mL.

Step 2: Incubate the culture at 37°C in a humidified atmosphere of 5% to 10% CO_2 in air. Allow cell density to reach in excess of 1 x 10^6 cells/mL.

Step 3: After one passage in the 1:1 mixture, sub-culture cells into Corning SF Medium only.

Method B

Step 1: Add serum to a small aliquot of Corning SF Medium at the same concentration as in the original medium. Seed cells from the original serum-containing medium into this mixture at approximately 3 to 5 x 10^5 cells/mL.

Step 2: Incubate the culture at 37°C in a humidified atmosphere of 5% to 10% CO_2 in air. Allow cell density to reach in excess of 1 x 10^6 cells/mL.

Step 3: After one passage in the serum-containing mixture, sub-culture cells into Corning SF Medium only.

Note: Anchorage-dependent cells can also be adapted to serum-free medium using the methods above. However, the removal of the cells from their culture vessel should be performed using an animal-free or non-mammalian cell dissociation solution (e.g., Accutase®). Under no circumstances should trypsin or other harsh enzymatic solutions be used without the addition of a trypsin inhibitor. Due to the absence of serum, which would contain trypsin inhibitors, the cells could be irreparably damaged.

Ordering Information

Cat. No.	Description	Size	Qty/Pk
40-101-CV	Corning® SF Medium with L-glutamine and 1 g/L BSA	500 mL	6
40-102-CV	Corning SF Medium with L-glutamine and 1 g/L BSA without phenol red	500 mL	6
25-058-CI	Corning Accutase® cell dissociation solution	100 mL	1

For more specific information on claims, visit the Certificates page at **www.corning.com/lifesciences**.

Warranty/Disclaimer: Unless otherwise specified, all products are for research use only. Not intended for use in diagnostic or therapeutic procedures. Not for use in humans. Corning Life Sciences makes no claims regarding the performance of these products for clinical or diagnostic applications.

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At Corning, cells are in our culture. In our continuous efforts to improve efficiencies and develop new tools and technologies for life science researchers, we have scientists working in Corning R&D labs across the globe, doing what you do every day. From seeding starter cultures to expanding cells for assays, our technical experts understand your challenges and your increased need for more reliable cells and cellular material.

It is this expertise, plus a 160-year history of Corning innovation and manufacturing excellence, that puts us in a unique position to offer a beginning-to-end portfolio of high-quality, reliable cell culture consumables.

For additional product or technical information, visit **www.corning.com/lifesciences/media** or call 1.800.492.1110. Outside the United States, call +1.978.442.2200 or contact your local Corning sales office.

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